



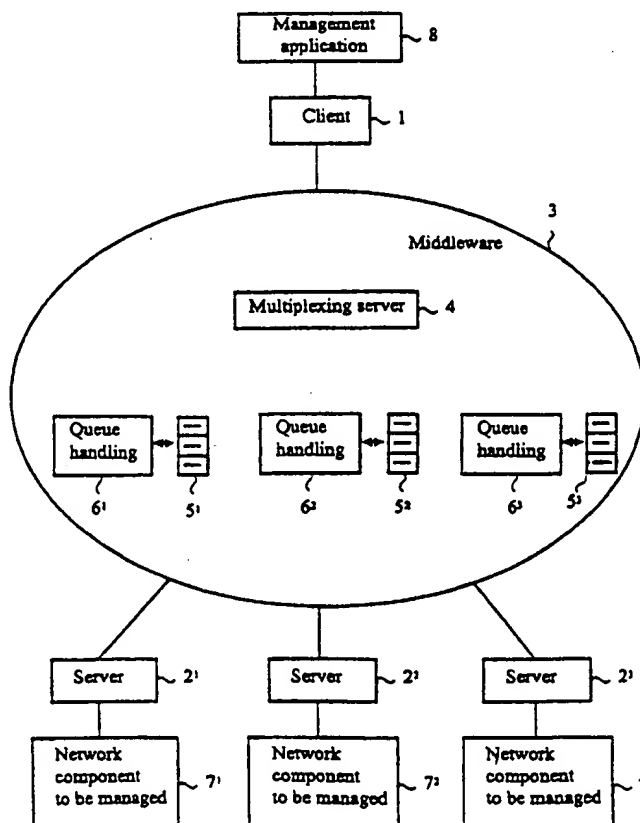
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(21) International Application Number: PCT/FI99/00374 (22) International Filing Date: 4 May 1999 (04.05.99) (30) Priority Data: 980985 4 May 1998 (04.05.98) FI (71) Applicant (for all designated States except US): SONERA OY [FI/FI]; Teollisuuskatu 15, FIN-00510 Helsinki (FI). (72) Inventor; and (75) Inventor/Applicant (for US only): TÖHÖNEN, Harri [FI/FI]; Porintie 3 A 4, FIN-00350 Helsinki (FI). (74) Agent: PAPULA REIN LAHTELA OY; Fredrikinkatu 61 A, P.O. Box 981, FIN-00100 Helsinki (FI).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments. (88) Date of publication of the international search report: 13 January 2000 (13.01.00)	

(54) Title: DISTRIBUTION OF A SERVICE REQUEST IN A CLIENT-SERVER ARCHITECTURE

(57) Abstract

The present invention relates to a system and a procedure for distribution of a service request in a computer system based on a client-server architecture and comprising at least one client (1), which sends service requests to servers (2¹, 2², ..., 2ⁿ); one or more servers (2¹, 2², ..., 2ⁿ), which provide callable services for the client (1); and middleware means (3). According to the invention, the system comprises a multiplexing server (4), by means of which the client's (1) service request is copied and distributed to the servers (2¹, 2², ..., 2ⁿ) for parallel execution; a queue system (5¹, 5², ..., 5ⁿ) for storing service requests not yet executed; and queue handling means (6¹, 6², ..., 6ⁿ), by means of which the service requests placed in the queue system (5¹, 5², ..., 5ⁿ) are passed on for re-execution. The invention allows transparent distribution of the service request, guarantees improved reliability of operation in failure situations and consistency of resources.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/FI 99/00374

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: G06F 17/30, G06F 9/46

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Computer, Volume 28, No 4, April 1995, R.M. Adler, "Distributed Coordination Models for Client/Server Computing" page 16, column 1, line 5 - line 17	1-4,7-11,14
A	see whole document	5-6,12-13
	--	
Y	Parallel and Distributed Systems 1996, Proceedings., 1996 Inter., Volume, June 1996, S. Majumdar et al, "Performance of scheduling strategies for client-server systems" page 448, column 2, line 4 - line 8	1-4,7-11,14
A	page 448, column 2, line 4 - line 8; page 450, column 1, line 1 - line 47	5-6,12-13
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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PCT/FI 99/00374

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0684558 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION), 29 November 1995 (29.11.95), see whole document -----	1-13

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